

**WE CLAIM:**

- 1           1.     A method for operating a converted vessel to perform drilling  
2 operations, said method comprising:  
3                 receiving a floating drilling rig that is configured for drilling  
4 operations while floating;  
5                 receiving a support barge component;  
6                 positioning the floating drilling rig over and affixing the floating  
7 drilling rig to the support barge component thereby providing a converted  
8 vessel operable to perform drilling operations while supported on a bottom of  
9 a water body;  
10                selectively filling a plurality of ballast tanks of the converted  
11 vessel to ballast the converted vessel into contact with the bottom; and  
12                performing drilling operations from the converted vessel while  
13 the converted vessel is supported on the bottom.
- 1           2.     The method of claim 1 further comprising, floating the converted  
2 vessel in water that is shallower than the draft of the floating drilling rig.
- 1           3.     The method of claim 1 wherein a footprint of the support barge  
2 component is larger than a footprint of the floating drilling rig and the method  
3 further comprises installing additional equipment on the support barge  
4 component.
- 1           4.     The method of claim 3 wherein the additional equipment is a  
2 cabin.
- 1           5.     The method of claim 1 further comprising, installing at least one  
2 vertically movable post on the converted vessel operable to stab into the  
3 bottom and laterally retain the converted vessel relative to the bottom.

1           6.     The method of claim 5 wherein the at least one vertically  
2     movable post is at least two vertically movable posts and the method further  
3     comprises:  
4             positioning the converted vessel about a drilling location;  
5             stabbing one of the at least two vertically movable posts into the  
6     bottom;  
7             rotating the converted vessel about the vertically movable post stabbed  
8     into the bottom; and  
9             stabbing the remaining of the at least two vertically movable posts into  
10    the bottom.

1           7.     The method of claim 1 wherein the floating drilling rig is  
2     classified for service in a defined body of water and the method further  
3     comprises transporting the converted vessel outside the defined body of  
4     water.

1           8.     The method of claim 1 wherein the floating drilling rig is  
2     classified for service in a defined body of water and the method further  
3     comprises seeking subsequent classification of the converted vessel for  
4     service outside of the defined body of water.

1           9.     The method of claim 1 wherein positioning the floating drilling rig  
2     over the support barge further comprises filling ballast tanks of the support  
3     barge component with water until the support barge component is ballasted to  
4     a depth that a top surface of the support barge component is at a lower depth  
5     than a lower surface of the floating drilling rig.

1           10.    The method of claim 1 further comprising, flowing water out of  
2     outlets on a bottom of the support barge component to break suction formed  
3     between the support barge component and the bottom of the water body.

1           11.    The method of claim 1 further comprising, opening at least one  
2 ballast tank of the support barge component to substantially freely  
3 communicate with water about the converted vessel.

1           12.    The method of claim 11 wherein opening at least one ballast  
2 tank of the support barge component comprises opening a valve that allows  
3 flow between the at least one ballast tank and the water about the converted  
4 vessel.

1           13.    The method of claim 11 further comprising, controlling an  
2 amount of water in at least one ballast tank near a front of the support barge  
3 component to control at least one of a front to rear trim and a port to starboard  
4 trim of the converted vessel.

1           14.    The method of claim 11 further comprising, opening at least one  
2 ballast tank of the floating drilling rig to substantially freely communicate with  
3 the water about the converted vessel.

1           15.    The method of claim 1 further comprising, opening at least one  
2 ballast tank of the floating drilling rig to substantially freely communicate with  
3 the water about the converted vessel.

1           16.    The method of claim 15 wherein opening at least one ballast  
2 tank of the drilling rig comprises opening a valve that allows flow between the  
3 at least one ballast tank and the water about the converted vessel.

1           17.    The method of claim 1 further comprising, supplying power from  
2 the floating drilling rig to the support barge component.

1           18.    The method of claim 1 further comprising, supplying at least one  
2 of machinery cooling water and fire fighting water to the floating drilling rig.

1           19.    The method of claim 1 further comprising, separating the  
2 support barge component from the floating drilling rig.

1           20.    The method of claim 1 wherein selectively filling a plurality of  
2 ballast tanks further comprises filling at least one ballast tank of the floating  
3 drilling rig and at least one ballast tank of the support barge component.

1           21.    The method of claim 1 wherein selectively filling a plurality of  
2 ballast tanks of the converted vessel comprises, selectively filling a plurality of  
3 ballast tanks of the converted vessel so that the converted vessel contacts the  
4 bottom with a first load then adjusting the level in the ballast tanks so that the  
5 converted vessel contacts the bottom with a second, lesser load than the first  
6 load.

1           22.    The method of claim 21 wherein a magnitude of the first load is  
2 a function of at least one of a weight of the converted vessel, an  
3 environmentally induced load, and a load due to drilling operations.

1           23.    A method for converting a floating drilling rig component  
2 configured for conducting drilling operations while floating to use in conducting  
3 drilling operations while supported on a bottom of a water body, said method  
4 comprising:  
5                    receiving a floating drilling rig component;  
6                    receiving a support barge component, said support barge  
7 component adapted for attachment to the floating drilling rig component and  
8 having a ballast system;  
9                    positioning the floating drilling rig component over and affixing  
10 the floating drilling rig component to the support barge component, thereby  
11 constructing a converted vessel operable to perform drilling operations while  
12 supported on the bottom.

1           24.    The method of claim 23 wherein the support barge component is  
2 sized such that the converted vessel has a shallower draft than a draft of the  
3 floating drilling rig component alone.

1           25.    The method of claim 23 wherein the support barge component is  
2 configured to contribute to a center of gravity of the converted vessel that  
3 substantially minimizes the amount of ballast water needed for trimming the  
4 converted vessel.

1           26.    The method of claim 25 wherein the support barge is configured  
2 to at least partially compensate for an eccentric center of gravity of the drilling  
3 rig component.

1           27.    The method of claim 23 wherein a footprint of the support barge  
2 component is larger than a footprint of the floating drilling rig component and  
3 the method further comprises installing additional equipment on the support  
4 barge component.

1           28.    The method of claim 23 further comprising, installing at least  
2   one vertically movable post on the converted vessel, the at least one vertically  
3   movable post operable to stab into the bottom and laterally retain the  
4   converted vessel relative to the bottom.

1           29.    The method of claim 23 wherein the floating drilling rig  
2   component is classified for service in a defined body of water and the method  
3   further comprises seeking classification of the converted vessel for service  
4   outside of the defined body of water.

1           30.    The method of claim 23 wherein the support barge component is  
2   adapted to flow water out of outlets on the bottom of the support barge  
3   component to break suction formed between the support barge component  
4   and the bottom of the water body.

1           31.    The method of claim 23 wherein the ballast system comprises a  
2   plurality of ballast tanks, and wherein at least one of the ballast tanks is  
3   adapted to substantially freely communicate with water about the converted  
4   vessel.

1           32.    The method of claim 23 wherein the support barge component is  
2   adapted to contribute to a center of gravity of the converted vessel that is near  
3   it's center of buoyancy.

1           33.    The method of claim 23 wherein the support barge component is  
2   adapted to provide at least one of electricity, machine cooling water, and fire  
3   water to the floating drilling rig component.

1           34.    A composite converted vessel for performing drilling operations  
2 while supported on a bottom of a water body, comprising:  
3                   a floating drilling rig component having equipment for performing  
4 drilling operations, said floating drilling rig configured for performing drilling  
5 operations while floating; and  
6                   a support barge component attached to the floating drilling rig  
7 component, the support barge component adapted to enable the composite  
8 converted vessel to perform drilling operations while supported on the bottom  
9 of the water body.

1           35.    The converted vessel of claim 34 wherein the support barge  
2 component is sized such that the converted vessel has a shallower draft than  
3 a draft of the floating drilling rig component alone.

1           36.    The converted vessel of claim 34 wherein the support barge  
2 component has a larger footprint than a footprint of the floating drilling rig  
3 component and at least one piece of equipment resides on the support barge  
4 component.

1           37.    The converted vessel of claim 34 further comprising at least one  
2 vertically movable post disposed on the converted vessel said post operable  
3 to stab into the bottom of the water body and retain the converted vessel  
4 laterally relative to the bottom.

1           38.    The converted vessel of claim 34 wherein the floating drilling rig  
2 is classified for service in a defined body of water and the converted vessel is  
3 classified for service outside of the defined body of water.

1           39.    The converted vessel of claim 34 wherein the support barge  
2 component has a plurality of ballast tanks and at least one of the ballast tanks  
3 is adapted to be opened to water about the support barge component and  
4 allow water to flow freely in and out of the ballast tanks.

1           40.    The converted vessel of claim 34 wherein the floating drilling rig  
2    component has a substantially planar bottom portion that abuts a substantially  
3    planar deck portion of the support barge component.

1           41.    The converted vessel of claim 34 wherein the support barge  
2    component has a suction breaking system operable to flow water out of  
3    outlets on a bottom of the support barge component to break suction formed  
4    between the support barge component and the bottom of the water body.

1           42.    The converted vessel of claim 34 wherein the support barge  
2    component is adapted to contribute to a center of gravity of the converted  
3    vessel being near a center of buoyancy of the converted vessel.